CLAIMS

(1) A heat-resistant film comprising at least any one of a polybenzazole, aramid and polyamideimide produced by sandwiching a polymer solution between two supports, introducing a laminate, obtained by converting the polymer solution into a thin film by a roll, slit or press, into a coagulating bath and peeling at least one side of the supports off in the coagulating bath to coagulate the polymer solution in the form of the thin film.

(2) A heat-resistant film according to Claim 1 wherein the polymer solution is an isotropic solution.

(3) A heat-resistant film according to Claim 1 or 2 wherein the coagulation bath is a poor solvent for the polymer, or a mixture of a poor solvent and a good solvent, or a solution containing salts in a poor solvent.

(4) A heat-resistant film according to any of Claims 1 to 3 wherein the support is a film allowing the poor solvent for the polymer in the coagulation bath or a vapor thereof to permeate and wherein the poor solvent or a vapor thereof which has permeate said film is used for effecting at least a part of the coagulation of the polymer solution.

(5) A composite ion-exchange membrane comprising a composite layer formed by impregnating a heat-resistant film according to any of Claims 1 to 4 with the ion-exchange resin and a surface layer consisting of an ion-exchange resin having no micropores formed on the both side of the composite layer as sandwiching the composite layer.